STAT

Ref: 552-0D-140

8 January 1964

STAT

Gentlemen:

STAT Enclosed is Progress Report on Project 552 for the month of December 1963.

Very truly yours,

STAT

President

ARB/de

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Declass Review by NIMA/DOD

VERSATILE, HIGH PRECISION STEREO
POINT TRANSFER DEVICE
DECEMBER 1963
PROGRESS REPORT
JOB #552

GENERAL

All engineering, design and production work is progressing most favorably with special emphasis placed on expediting long lead items to minimize delays in their delivery.

OBJECTIVE ASSEMBLY

Engineering and design layouts are 80% complete and detailing is well under way with emphasis being placed on release of long lead parts. Special efforts are being devoted to minimize the separation between optical axes for viewing conjugate points on adjacent stereo pairs. Special lens cells, and close fitting housings and mounts, have been designed to make this possible. The bright dot reticle used for measurement will feature adjustable diameter and brightness. Since reticle is in a plane in front of zoom optics image motion brought about by imperfections in zoom optics, such as image shift and vibration will not alter reticle dot-to-image relationship. Therefore, operator can have a 4x change in image magnification during measurement process without loss in precision.

EYEPIECE ASSEMBLY

Design is 90% complete, and parts detailing is 50% complete with emphasis placed on long lead items. The remaining details should be completed in January, with final releases and assembly drawings to be completed shortly thereafter.

X-Y CARRIAGES

Pattern and casting drawings were released for both carriages. Final machining drawings have been released. All brackets, bearing blocks, screws, hangers and hardware have been released for manufacture. Efforts are being made to accelerate lead screw delivery.

FRAME ASSEMBLY

The pattern for the base casting has been completed and inspected by [redacted] The actual casting will be poured and stabilized by mid January. Rough machining, heat treat, finish grinding are scheduled for completion in late January to early February, with protective coating and painting shortly thereafter. Special handling and monitoring efforts are being made to minimize delay in this schedule.

LIGHT TABLE AND FILM DRIVE

Approximately 90% of the parts were released to manufacturing. Glass supporting frames and film drives design are completed, and have been in manufacturing for some weeks. The remaining work lies in completing the vacuum holddown mechanism. Much effort has been placed in making its operation and adjustments convenient and foolproof. The design will accept only 70mm, 5" and 9 1/2" films. Chips may be used, providing manifold sealing precautions are made and that one dimension of chip corresponds to 70mm, 5" and 9 1/2" standard film width.

Cold cathode light sources have been ordered, and are expected in January.

ELECTRICAL CIRCUITS WIRING AND CONTROLS

Schematics are being prepared and many long lead purchase items have been purchased. Wiring will take a functional separation for harnesses and connections so that trouble shooting and manufacture will be simplified.

Work to be Completed During Next Reporting Period:

1. Complete design and detailing of objective assembly.
2. Complete detailing and purchasing for eyepiece assembly.
3. Complete vacuum holddown design and detailing.
4. Complete electrical schematic, start wiring harnesses.
5. Monitor all purchases and out-of-plant machine work.